

AQUIFER RESTORATION

The Fernald Preserve is located over the Great Miami Aquifer, one of the nation's largest sources of drinking water.

As a result of uranium-production operations at the site from 1952 to 1989, levels of uranium in the groundwater are above the U.S. Environmental Protection Agency's health-protective concentration limit of 30 parts per billion. DOE is in the process of restoring the uranium-contaminated portions of the aquifer and bringing the uranium-concentration level down to, or below, the allowable drinking water limit.



For more information about the Fernald Preserve, contact:

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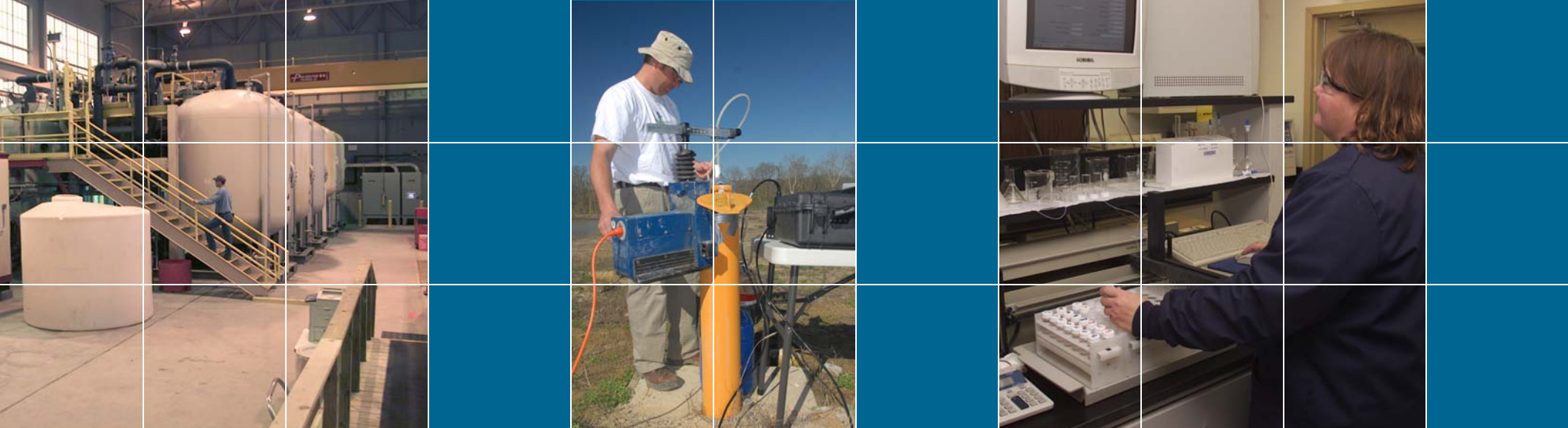


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meeting drinking water standards for uranium

Fernald Preserve





On October 29, 2006, the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) remediation of the former Fernald uranium-processing site was completed, with one exception: the groundwater remedy.

The Fernald Preserve is located over the Great Miami Aquifer, one of the nation's largest sources of drinking water. As a result of uranium-production operations at the site from 1952 to 1989, levels of uranium in the groundwater are above the U.S. Environmental Protection Agency's health-protective concentration limit of 30 parts per billion. The affected area covers about 189-acres—the entire site is 1,050 acres. DOE is in the process of restoring the 189 acre portion of the aquifer and bringing the uranium-concentration level down to the drinking water limit.

With the exception of the ongoing aquifer restoration, the Fernald property has been cleaned to standards

established by the site's neighbors. These cleanup standards were approved by the U.S. and Ohio Environmental Protection Agencies as being protective of human health and the environment. DOE's commitment to restoring the aquifer is defined in the Record of Decision (ROD) for Operable Unit 5, one of the five areas at Fernald that the U.S. Environmental Protection Agency designated for cleanup during the CERCLA remediation. As part of cleanup operations, extraction wells were installed and became operational in 1993. They are located at the leading edge of the contamination, which is off the Fernald Preserve property. The groundwater remediation system consists of 23 extraction wells, operating to a target pumping rate of 4,775 gallons per minute. As portions of the aquifer meet cleanup requirements, the size of the remediation system will be reduced. Based on predictions of when remediation will be complete, some extraction wells are scheduled to continue operating until 2023.

Water from the wells is treated as needed at the Converted Advanced Wastewater Treatment facility (CAWWT). The CAWWT facility has a treatment capacity of 1,800 gallons per minute. Leachate (the liquid that drains from the On-Site Disposal Facility) is also treated here. Treated water and bypassed (untreated) groundwater combine and are monitored at the east side of the site, forming Fernald Preserve's regulated discharge to the Great Miami River. Treatment is applied as needed so that the total mass of uranium discharged to the Great Miami River is less than 600 pounds per year. Treatment ensures that the total uranium concentration in the blended effluent does not exceed 30 parts per billion—the monthly flow-weighted average—when it is discharged to the river.